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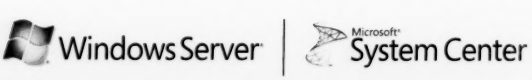

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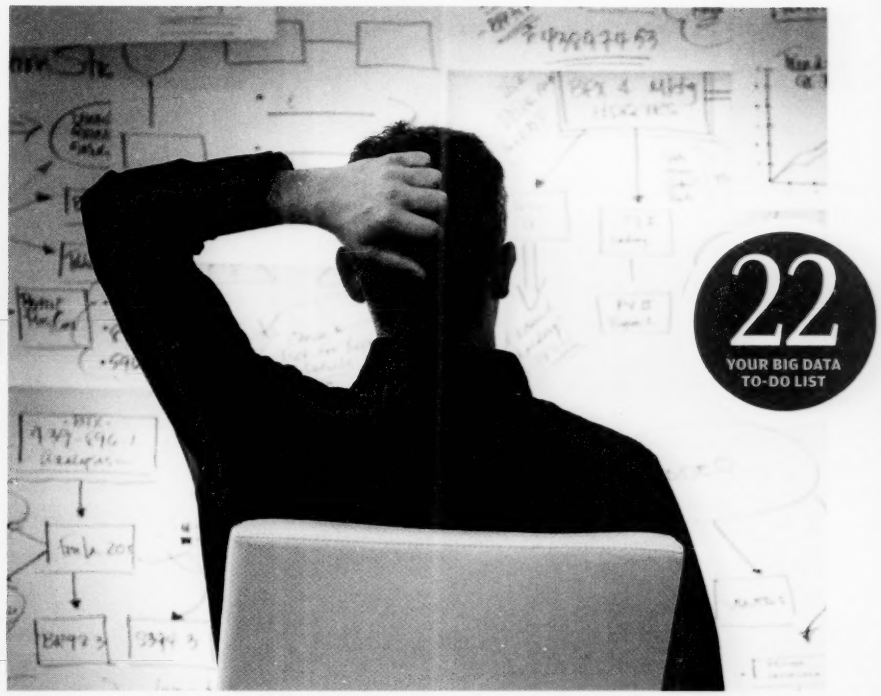


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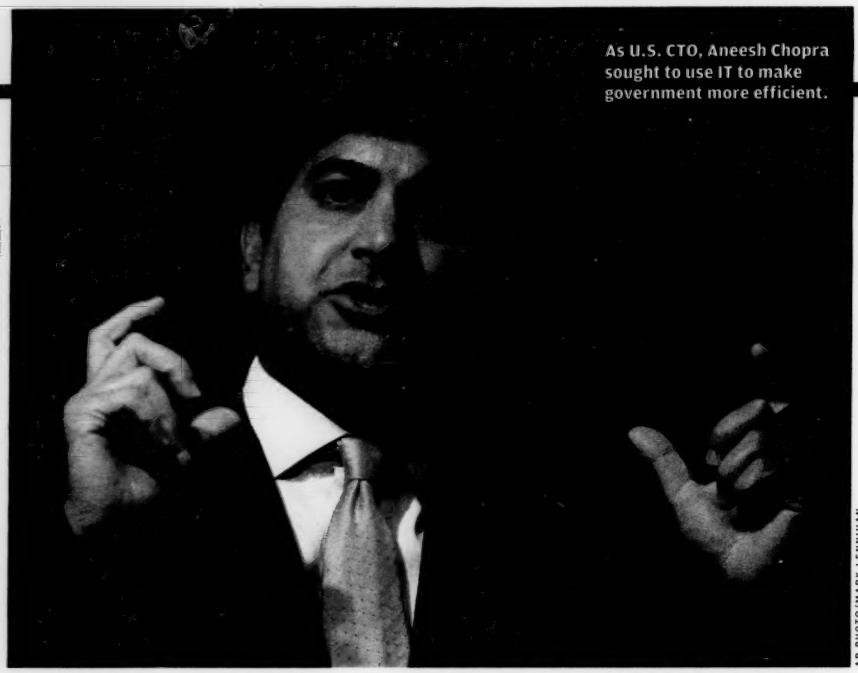
# HeadsUp



As U.S. CTO, Aneesh Chopra sought to use IT to make government more efficient.

AP PHOTO/MARK LENNIHAN

GOVERNMENT

## First White House CTO Chopra Resigns

**ANEESH CHOPRA,** who served for almost three years as the first federal CTO, has resigned amid speculation that he will run for lieutenant governor of Virginia.

Chopra, appointed by President Barack Obama to what was a newly created position in May 2009, focused on technology policy. He worked on modernizing the federal government's IT infrastructure, pushed for a nationwide public safety broadband network, helped develop Internet policy and assisted in implementing Obama's open-government strategy, said John Holdren, director of the White House Office of Science and Technology Policy, in a recent blog post.

In September 2009, Obama said Chopra was "charged with looking at ways technology can spur innovations that help government do a better and more efficient job."

Mission accomplished, Holdren said. "Aneesh has led that charge in an energetic, innovative and amazingly effective manner, and sowed the seeds necessary to bring our government into the 21st century," he wrote.

Tech trade groups TechAmerica and the Business Software Alliance (BSA) also praised Chopra's service. BSA president and CEO Robert Holleyman called Chopra a "tireless leader and advocate" for using technology to tackle difficult problems faced by the country. Dan Varroney, TechAmerica's acting president and CEO, said in a statement that Chopra has left "an indelible mark" on U.S. technology policy "because of his belief in the transformative nature of technology."

*– Grant Gross, IDG News Service*

OPERATING SYSTEMS

## HP Readies Open-Source webOS Release

Hewlett-Packard announced plans to release the code behind webOS this September under the Apache License 2.0.

The license allows developers to mix open-source code with their own inventions and sell products using the code.

The webOS operating system was developed by Palm for phones and tablets. HP acquired Palm in 2010 and late last year announced it will no longer manufacture devices that use the software. Instead, HP said, it will release webOS to the open-source community.

HP laid out a timeline for releasing components of the software, starting with Enyo 2.0 and its source code. With Enyo, developers can create applications that work across different types of webOS-based devices. Enyo 2.0, released in late January as open-source software, adds support for other mobile operating systems. Now, developers can more easily write applications that work across webOS, iOS and Android devices.

The full open webOS beta will be published in August, with Version 1.0 coming out in September.

In comparison, Symbian took a year and eight months to release its code, before it withered away battling new operating systems from Apple and Google.

– NANCY GOHRING, IDG NEWS SERVICE

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**BETWEEN THE LINES**
By John Klossner

**IT INDUSTRY**

# Factory Conditions Elicit Little Outcry

**AMID RENEWED REPORTS** of poor working conditions in China at factories making products for Apple and other companies, it's unclear whether users will demand change.

Some Apple customers at the recent Macworld/iWorld show in San Francisco seemed to react with a shrug to a lengthy story in *The New York Times* that alleged poor working conditions at Chinese factories operated by Apple contractors. The story described fatal accidents and long hours, as well as crowded living conditions in dorms near the factories.

The report is unlikely to change Apple customers' buying habits, said Steve Hathaway, a show attendee from Hercules, Calif. "Most companies get their stuff made elsewhere because it's cheaper," he said.

Asked if Apple customers would pay more for products from factories with safer conditions, Hathaway said, "Apple already has a premium price; you'd think they should be doing something on their end of it to make it right."

Victor Cajiao, who runs the website TypicalMacUser.com, said he thinks attitudes will eventually change. But, he added, this isn't purely an Apple problem: Many of the factories with dicey practices also make products for other technology vendors.

Still, responses seem tepid at best. An online petition at Change.org that asks Apple to end "slavery" conditions at its Foxconn contractor has garnered only about 500 signatures. In comparison, a Change.org petition calling on Bank of America to drop a $5 debit-card fee received over 300,000 signatures.

Apple executives didn't respond to requests for comment on the *Times* article, but Apple CEO Tim Cook discussed the issue in a company memo to staff obtained by 9to5Mac. Apple cares about "every worker" in its supply chain, he said in the memo, and it has "made a great deal of progress and improved conditions for hundreds of thousands of workers."

*– Kerry Davis, Agam Shah and Grant Gross, IDG News Service*

## Micro Burst

In 2011, worldwide smartphone shipments were

**487.7M**

units higher than the combined sales of laptops, desktops, tablets and netbooks.

**APPLICATIONS**

## Office 15 Public Beta Due This Summer

Microsoft has kicked off a "technical preview" of the next version of its Office suite and promised that a public beta will ship this summer.

The move is a repeat of the route Microsoft took with Office 2010, which was distributed to a select group of testers as a technical preview in July 2010.

In a recent blog post that announced the preview, Microsoft said little about "Office 15," the code name for the product, and nothing about the new Word, Excel, Outlook and PowerPoint component applications.

"I'm not able to share too much about Office 15, but I can tell you Office 15 is the most ambitious undertaking yet for the Office Division," wrote P.J. Hough, the executive who heads the division. "With Office 15, for the first time ever, we will simultaneously update our cloud services, servers and mobile and PC clients for Office, Office 365, Exchange, SharePoint, Lync, Project and Visio."

Hough said the Office 15 technical preview was "already full," but added that "everyone will have the opportunity to try the Office 15 public beta later this summer."

He did not specify a date or set a month for the beta's availability.

– GREGG KEIZER

# TD Bank Unites 85,000-plus Workers

**The bank deploys a collaboration tool to encourage brainstorming among its widely-distributed 85,000-plus workers. By Sharon Gaudin**

**BUILT VIA A SLEW OF MERGERS AND ACQUISITIONS,** TD Bank Group in recent years had seen its employees lose the ability to easily collaborate with one another as its workforce grew rapidly across the United States and Canada.

"It was really hard to find [internal] experts and know who to go to for different issues," said Wendy Arnott, vice president of social media and digital communications.

"We needed a way for people to communicate and help each other," added Glenda Crisp, vice president and CIO of the Toronto-based parent of TD Bank, TD Canada Trust, TD Waterhouse, TD Auto Finance and other financial services firms. "[Employees] needed to be able to work together more effectively."

TD Bank Group says it has 19 million customers and more than 85,000 employees, mostly in the U.S. and Canada.

Arnott said that as the bank grew over the past decade or so, executives noticed some employees using social networks like Facebook to communicate. By 2007, the bank formally began using social tools, first publishing articles on its intranet and then allowing employees to offer advice or ask questions, Arnott said.

Yet, said Crisp, Canada-based staffers like herself generally "weren't able to see [and easily communicate with] the U.S. employees."

That has changed, she said, since late last month when TD Bank completed a broad rollout of IBM's Connections collaboration software to 55,000-plus workers in Canada and to more than 28,000 in the U.S.

"Now I can see all of my U.S. colleagues and [can] search for their expertise," Crisp said. "I've never been able to do that before."

TD Bank selected the IBM software after evaluating social collaboration tools from 20 vendors, Crisp noted.

The rollout started with a pilot program for less than 1,000 people last August.

The software was available to workers in all Canadian facilities by November, and to all U.S. employees by late last month.

"A lot of companies tend to start smaller and go division by division," Arnott said. "We decided the power of social is in numbers, so we wanted everyone up there at once."

The implementation team faced a challenge in integrating Connections with TD North's corporate single-sign-on system, but Crisp said that the problems had more to do with the company's complex technology environment than with IBM's software.

TD Bank executives wouldn't reveal the cost of the project.

Dan Olds, an analyst at Gabriel Consulting Group, said the problem faced by TD Bank isn't unusual among large companies.

"Companies have tried various ways to get employees to collaborate more in the past, but with somewhat limited success," he said.

The rise of consumer social networks has shown IT executives the potential of systems like the one TD Bank deployed, Olds added.

"I think more companies will be taking this route, particularly those that have a lot of knowledge workers, although I think it can pay off for companies in almost any industry," he said. "At some point, it will be an accepted part of a company — like email." ◆

> **I think more companies will be taking this route,** particularly those that have a lot of knowledge workers, although I think it can pay off for companies in almost any industry.
>
> ANALYST, GABRIEL CONSULTING GROUP



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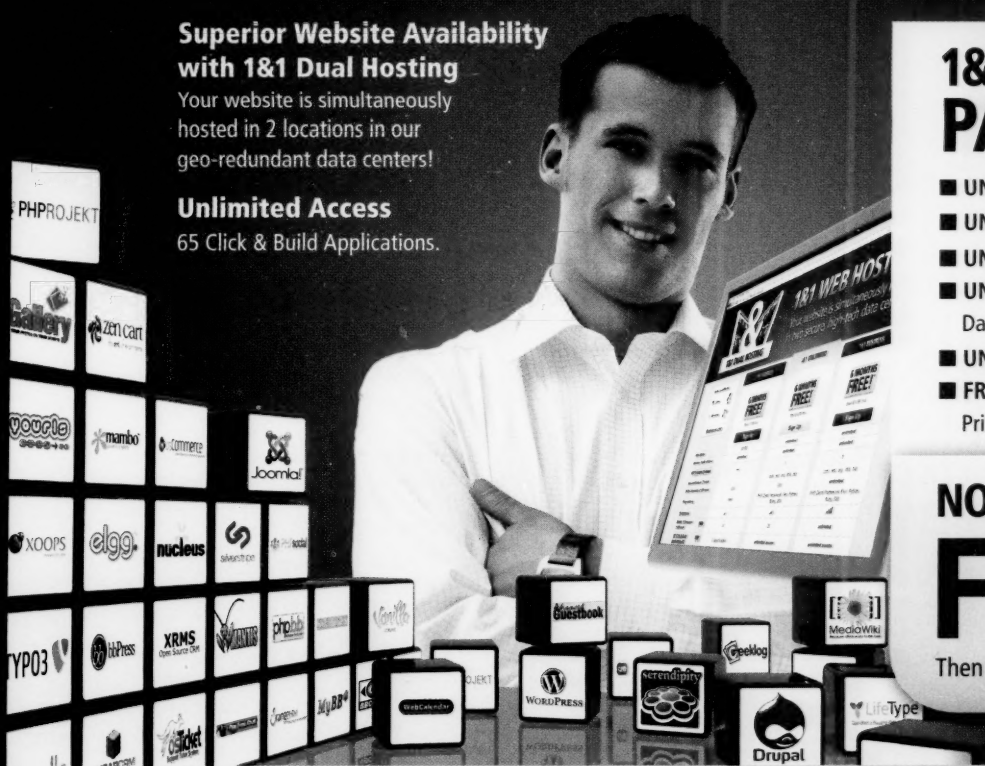


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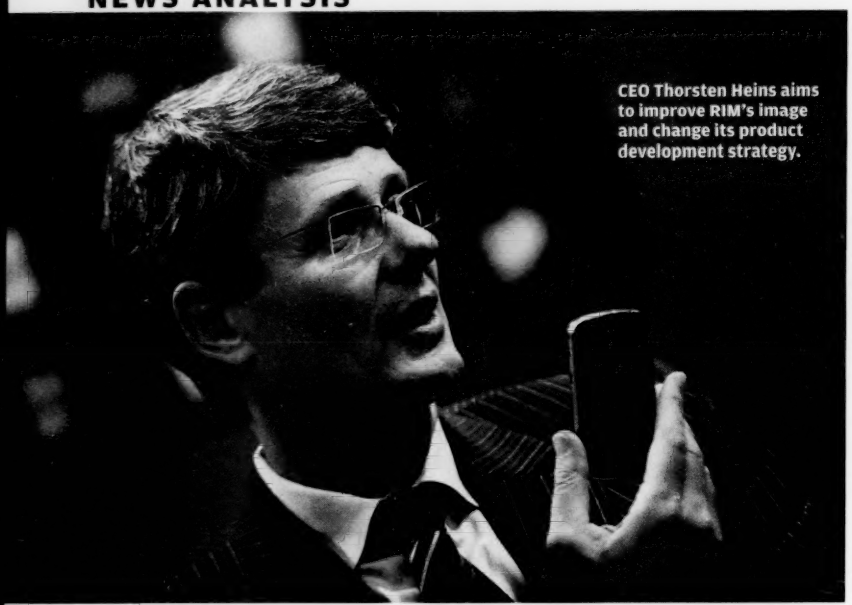

CEO Thorsten Heins aims to improve RIM's image and change its product development strategy.

# Is It Too Late To Save RIM?

**New CEO Thorsten Heins faces a Herculean task in trying to make the smartphone maker relevant again. By Matt Hamblen and John Ribeiro**

**NEW RESEARCH IN MOTION** CEO Thorsten Heins has a small window of opportunity to resuscitate the long-stumbling smartphone maker.

Analysts and industry partners think Heins, promoted to lead the company late last month, may have only until December to prove his mettle. By then, they say, he must get new BlackBerry 10 smartphones out the door and also get sales off to a good start for the Playbook 2 tablet, which is slated to start shipping next month.

"The execution is what has to be done. [Heins] has to keep the trains running on time," said Rick Segal, CEO of Fixmo, a provider of risk management software for BlackBerry, Apple iOS and Android smartphones.

"If there's no movement in 24 months, he's toast. In fact, if they miss Christmas [2012 product rollouts], that will be ugly," Segal added.

Heins, who joined RIM in 2007 as senior vice president of hardware engineering and was later named COO, takes over at a time when the smartphone pioneer is suffering a steep decline in its share of the market it helped create. Business users and consumers are increasingly favoring Apple's popular iPhone and the numerous devices running the Google-developed open-source Android operating system over RIM's once-dominant BlackBerry models.

RIM's longtime strategy of focusing on business users has been hit hard by the growing trend of people using personal devices for work-related tasks.

The Waterloo, Ont., company's piece of the smartphone pie has declined steadily in recent years, especially in the important U.S. market, where it has seen its share plunge from 24% in the third quarter of 2010 to just 9% a year later.

Some analysts also note that RIM's reputation has suffered in the wake of multiple service outages, including one last fall that hit BlackBerry users in most of the world. Moreover, analysts contend that the company has also been hurt in recent years by widespread criticism of co-CEOs Mike Lazaridis and Jim Balsillie, both of whom were replaced by Heins.

Heins said his priorities are to hire a new chief marketing officer to sharpen RIM's image, and to change its product development strategy. "We need to be more marketing-driven, and we need to be more consumer-oriented because that is where a lot of our growth is coming from," he said shortly after his appointment.

On the development side, the company will place more emphasis on prototyping and rely less on its current practice of innovating while developing products.

"Changing the CEO in and of itself will not turn things around," said Jack Gold, an analyst at J.Gold Associates. "RIM also needs to get the new BlackBerry 10 OS out as a quickly as possible — and make sure it shines."

Gold added that it's important for critics to remember that RIM is "not doing badly in many parts of the world," and is still making money.

In its most recent fiscal quarter, which ended Nov. 26, the company reported a profit of $265 million — but that was down 71% from that same period a year earlier. Sales in the quarter slipped 6% to $5.2 billion.

"They are not falling into obscurity," Gold said. "At the end of the day, it will be about execution." ◆

**Ribeiro** *is a reporter for the IDG News Service.* **Mikael Ricknais** *of the IDG News Service contributed to this story.*

If there's no movement in 24 months, he's toast. In fact, **if they miss Christmas** [2012 product rollouts], that will be ugly. CEO, FIXMO



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# THE Grill

## Catherine P. Bessant

This CIO's mandate is to streamline and modernize back-office operations.

**Preferred social media:** I follow both of my children, ages 11 and 15, on Twitter.

**Technology du jour:** Siri is becoming my new best friend.

**Personal productivity tool:** Tablets. They make it comfortable for me to be efficient in the use of my time.

**Off-hours pastimes:** Fitness, and transporting, cheering on and being with my children.

**Vice:** Salt is my last remaining vice. I've become sadly vice-reduced.

**Most people don't know...** I've been a NASCAR fan since I was 11 years old. I used to make money cleaning up the Michigan International Speedway after the races.

**TWO YEARS AGO,** *Catherine P. Bessant was tapped to lead Bank of America's Global Technology and Operations (GT&O) group, which has more than 100,000 staffers and contractors in 40 countries. Here Bessant talks about leading a tech group that includes five CIOs as direct reports, the importance of employee diversity, and how relying too much on third parties for IT services can backfire.*

**You came into an IT leadership position from the business side. Was it a hard transition?** I was helped by the fact that I've been a part of most of the businesses we serve. I came to the field having had a fair amount of experience using the technology.

**What has been one of your most effective projects?** After a lot of planning over many years, we're

*Continued on page 10*



IAN CURCIO / COURTESY OF BANK OF AMERICA

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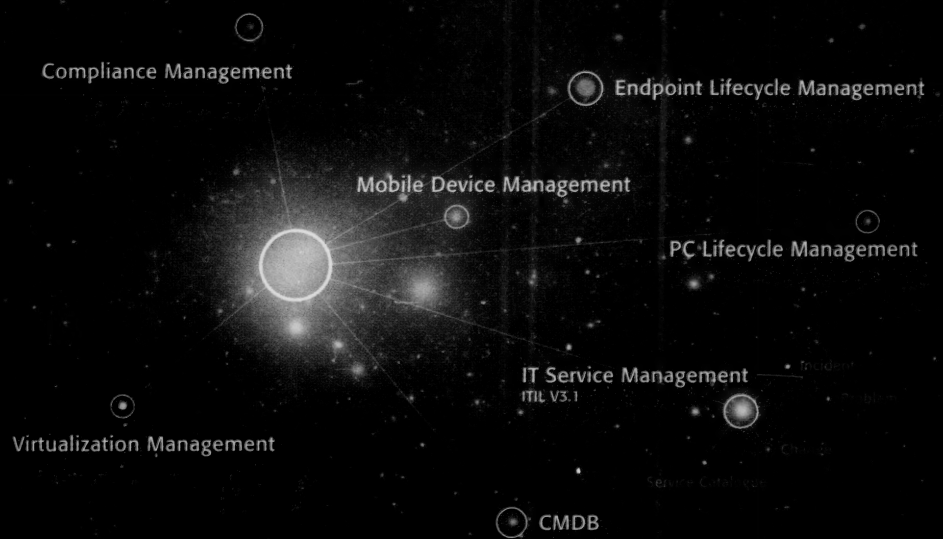


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> **One of the company's key operating principles** is to clean up all legacy issues. Those targets are well in sight.

*Continued from page 8*

in the final stages of transitioning our California and Northwest regions' core banking systems into the model platform used by the company so that we have a single, core banking platform across the U.S. We retired 11,000 different batch jobs that ran daily and decommissioned 110 obsolete applications.

**What was the impetus behind that project?** The undertaking of an initiative like this is challenging. It produces a great benefit to existing customers but is not necessarily the next great product you're going to use to boost revenue. But one of the company's key operating principles is to clean up all legacy issues. Those targets are well in sight.

**What other projects have you overseen?** We're proud of our mobile banking platform. We had the first mobile banking app for the iPhone. In terms of commercial clients, in the last 24 months we have made significant enhancements to the CashPro Online portal. We scaled it so that clients can use it globally. In our wealth management business, there's a portal called MyMerrill that now allows clients to see both their banking and investment accounts.

**Have you had any failures along the way?** We had a very public and painful degradation of service at the end of September 2011 in our online consumer banking space. From a statistical perspective, it was not nearly as damaging as the public perception of it. On our worst day, we successfully processed 97% of our customer interactions. But we took an event that should have been manageable and made it into a six-day event. We had media folks logging on to BankofAmerica.com and seeing a flash page meant to be a click-through page to online banking, and it used the words "occasionally unavailable" or "temporarily unavailable." It then offered a click-through, [but] anyone who looked at that page thought we were saying we were unavailable.

**What did you learn from that experience?** We need to be brilliant at reacting. We used to have some time to fix things. Now, because of the speed of technology, I know about [problems] at the same time our clients do, and our ability to react becomes as important as the ability to prevent.

**How do you react appropriately?** Most customers will try again, so it's very important that you fix the underlying problem so that their next attempt is successful. Then use social media to get accurate information out, and use flash pages and other components to effectively tell customers how to get service.

**Which upcoming projects are you most passionate about?** I am very passionate about using technology to reduce risk permanently. We always have to be agile, and the risks of tomorrow are different from today, but we think of technology as our No. 1 weapon in the art of risk reduction.

We have a couple of significant platforms that are almost at the end of their life cycle, and there's tremendous pull from the business and within GT&O to modernize our global banking platforms.

I'm also passionate about the diversity and breadth of our technological talent, developing people so they're well-positioned for the technology and operating jobs that exist in our company.

**Does your quest for diversity include programs to attract more women to IT?** CEO Brian Moynihan challenged me, saying "You have five CIOs, you're a woman and you can only come up with one CIO who's a woman?" He puts the accountability on me. I do know from experience that some strategies can be effective — visible leadership, constant focus and development, and goal-setting and accountability. We sponsor Women in Technology & Operations, which is specifically designed to support women technologists as they go through their careers.

**As more IT operations move into public and private clouds, how does that affect what you're looking for in IT staff?** There is no substitute for world-class technology and engineering and math.

When I have seen projects that were too slow or too expensive or didn't work and play well with other projects, one of the root causes has been an overreliance on third parties. Coming into the job, I would have [valued] the versatility and general business management it takes to manage third parties. Now, I think an overreliance on third parties creates risk and gets in the way of outcomes.

– *Interview by* **Robert L. Mitchell**

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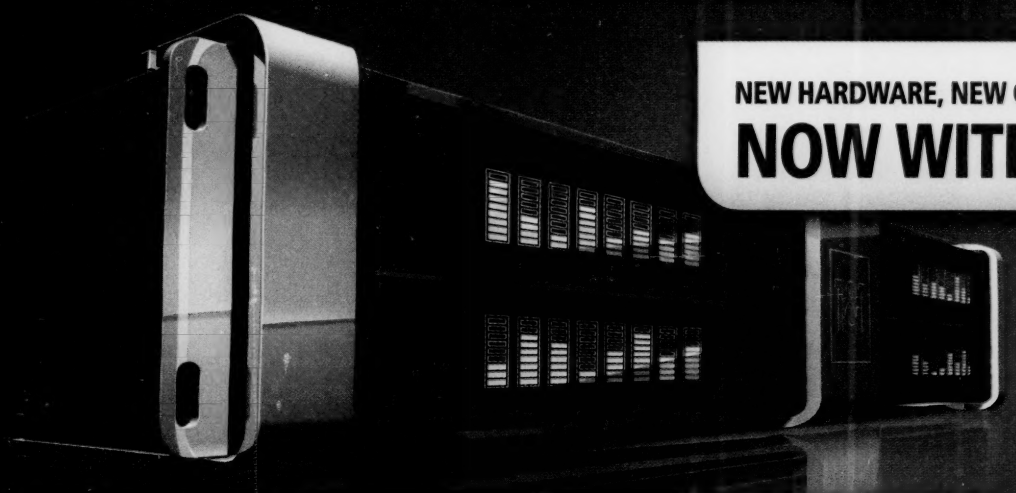

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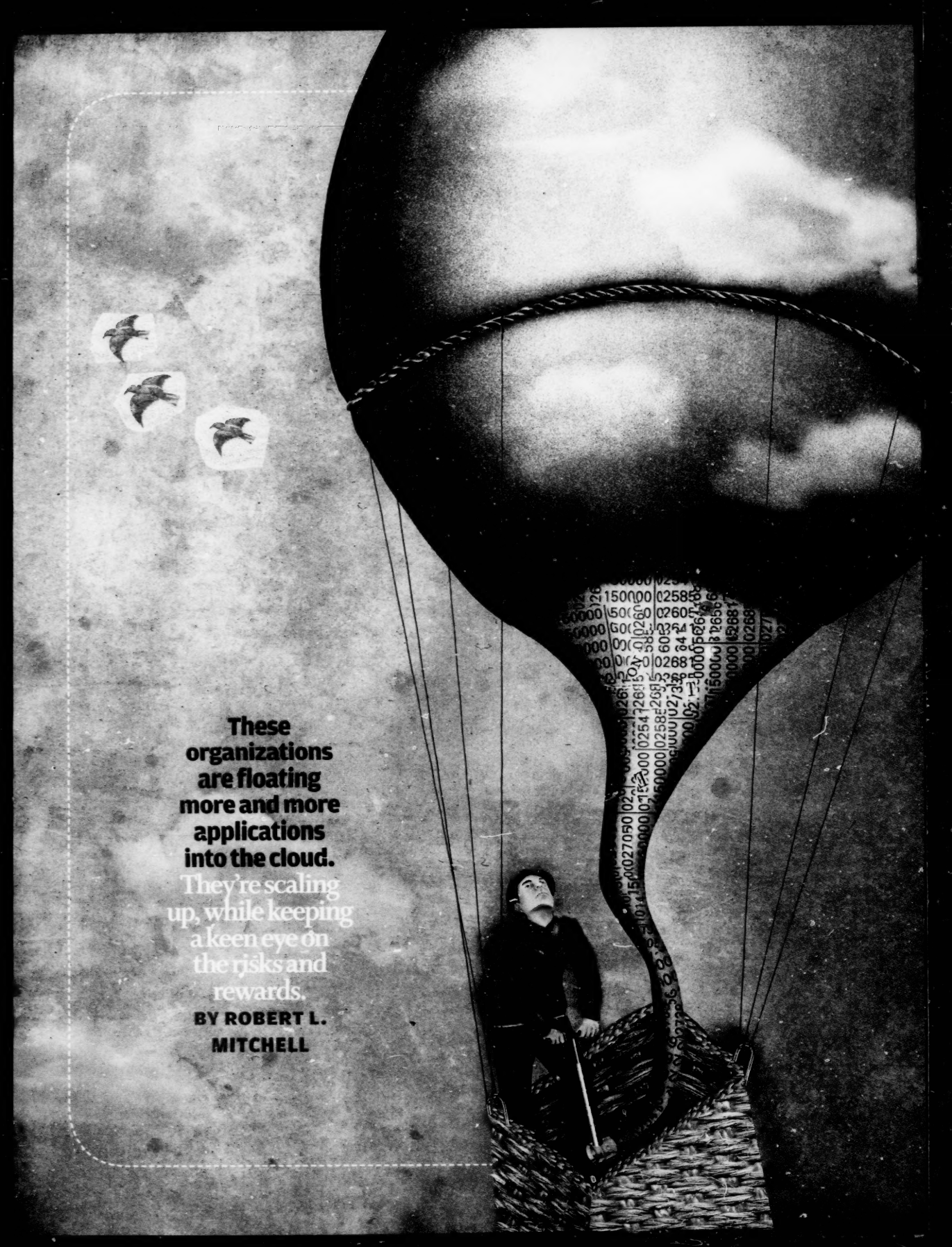


**These organizations are floating more and more applications into the cloud.** They're scaling up, while keeping a keen eye on the risks and rewards.

BY ROBERT L. MITCHELL

# Big SaaS

## DONE RIGHT

**GUARDIAN LIFE INSURANCE** isn't about to take big risks when making IT investments, and CIO Frank Wander will be the first to tell you that he doesn't have a cloud computing strategy, per se.

But over the past five years, the $10 billion financial services company has moved 18 applications into the cloud. It shut down a compute grid and moved its actuarial modeling application into an Amazon EC2 cloud. And it's now in the process of broadly deploying two major software-as-a-service suites.

LARRY GOODE ILLUSTRATION

## WOULD YOU SIGN THIS CONTRACT?

**THE FOLLOWING TERMS and conditions have been summarized from actual SaaS vendor agreements.** It pays to read the fine print. What's more, users may encounter a "click-wrap agreement" that pops up, even if they have a separate contract. Which agreement takes precedence if a user clicks OK? Make sure your contract spells that out, says Russell Weiss, a partner at Morrison & Foerster.

- The SaaS vendor can suspend your right and license to use services, or terminate the agreement in its entirety, for any reason or no reason, at its discretion at any time, with, at most, 60 days' notice.
- In the event of a suspension of service, the SaaS provider will not intentionally erase your data (but will not represent that it will preserve it) and can condition return of your data upon your compliance with terms and conditions that the SaaS provider may establish in the future.
- Your access to services may be suspended without notice, and the SaaS vendor will have no liability with regard to such downtime.
- You bear sole responsibility for adequate security, protection and backup of your data, even though the other party is hosting it.
- The contract terms can be changed at any time by the SaaS vendor.
- Your company must indemnify the SaaS provider from all claims relating to your use of the vendor's services, with no limitations on liability.

SOURCE: MORRISON & FOERSTER

One of the two is Workday's human resource management suite. Guardian wasn't ready to reveal the other, but at the Atmosphere conference last fall, Google announced that it had signed Guardian as a Google Apps customer.

There's no cloud agenda at work here, says Wander. Each service has earned its seat at the table by undergoing a rigorous technology acquisition process that has been updated to include considerations unique to SaaS and other cloud services. Each service has also passed through a collaborative review process that involved the legal, security and sourcing groups in addition to IT.

"We don't do anything because it's cloud. But if the financials look right, if the risk profile looks right, if the richness and robustness look right, we go with that solution," says Wander.

The sheer breadth of Guardian's move to the cloud puts the company on the leading edge among Fortune 250 organizations. The extent of its commitment to cloud services is also changing the business's IT infrastructure and redefining roles in the IT organization.

As more corporate infrastructure moves to SaaS, it's important for organizations to build a strong foundation of best practices to manage risks around security, uptime guarantees, compliance, limitations of liability, remedies and other contract details, say Wander and other IT executives. The business must be fully engaged in the technology acquisition process, and the organization must follow best practices that are well thought out — from the initial request for information to integration, ongoing management and contract renewal.

*Computerworld* talked with several organizations about the challenges they face in scaling up with SaaS and other cloud services, why the technology still isn't the best fit for some applications or business requirements, and why they decided to sign on — or walk away.

### Leading by Example

Wander "is a real leader," says Robert McNeill, vice president of research at HFS Research. In many organizations, he says, SaaS "happens" to CIOs as business units bypass IT. "What's interesting is that he is using SaaS in IT — an area that he controls. He is embracing SaaS as a way of changing the business," says McNeill.

But Wander isn't alone in his thinking. The number of SaaS implementations is climbing in other enterprises, says McNeill. He adds, "We're seeing global implementations of cloud services across the very largest of organizations," including even core enterprise applications to some extent. McNeill sees the use of horizontal SaaS applications globally or across large swaths of the corporate user base as a key trend.

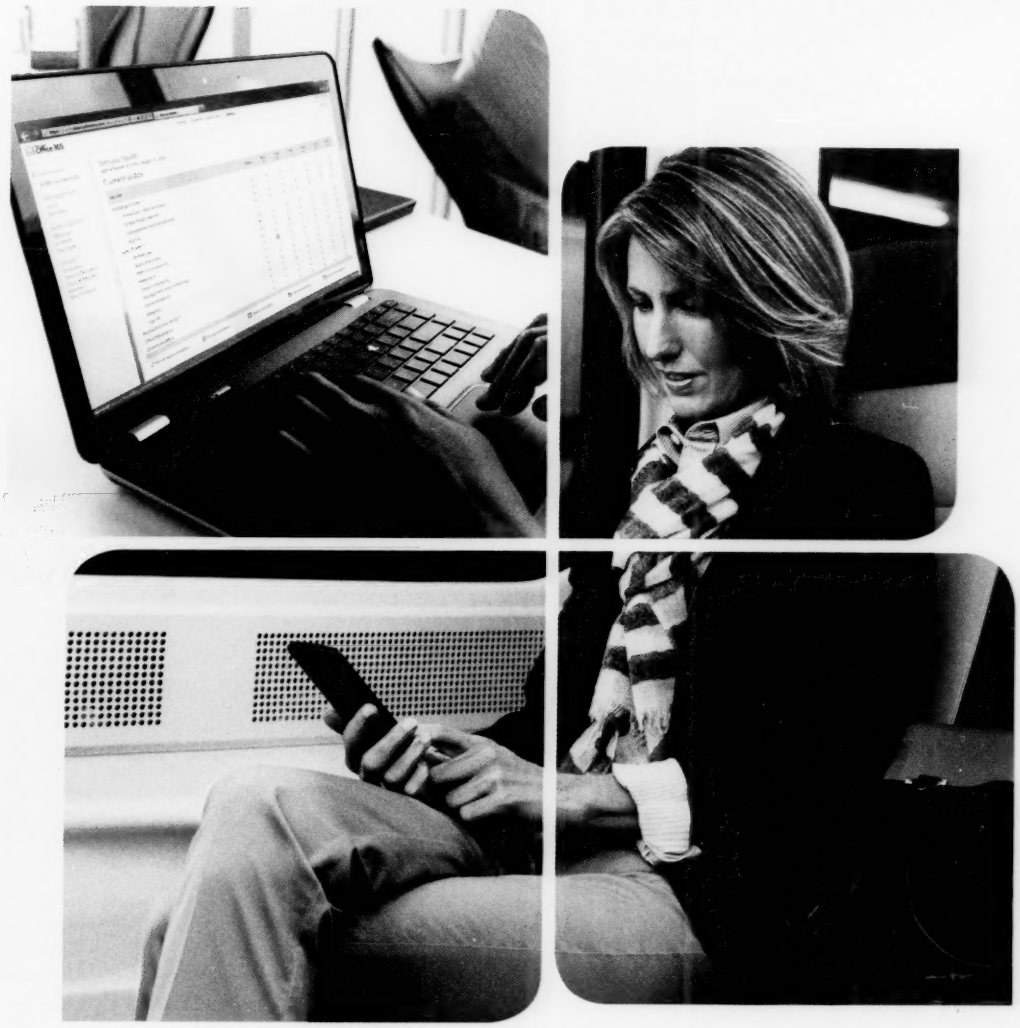
That view is backed up by research from Gartner. The overall market for SaaS-delivered enterprise applications will increase from $9.97 billion to $23 billion by 2015, representing a compound annual growth rate of 17.9%, according to a November 2011 Gartner report.

Cindy McKenzie, senior vice president of enterprise application services at Fox Entertainment Group, has also moved aggressively into the cloud. Transferring 11 shared services applications, ranging from recruiting to tax reporting, over to SaaS providers was "the riskiest business decision I have made in the last 18 months," she says. The global SaaS deployments, which host personally identifiable information and other sensitive data, "pushed information security, audit and legal [departments] past their comfort zones," but allowed the business to get strategic initiatives up and running more quickly and at a lower cost than on-premises alternatives, says McKenzie.

This year, Fox plans to move more corporate applications to the public cloud, including payroll and HR. The new system is easier to use than the existing

*Continued on page 16*

Microsoft



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*Continued from page 14*

PeopleSoft application, has passed a five-year total-cost-of-ownership evaluation and can be online in much less time than it takes to upgrade PeopleSoft.

The most critical success factor, McKenzie says, was involving the audit, security and compliance departments from the beginning. "It saved a lot of headaches. If you try to do that work after the fact or when you're signing a contract, you've lost your negotiating power," she says. "The biggest surprise was how immature the governance processes were for some of the smaller SaaS vendors. We ended up pushing a number of vendors to make changes to meet our standards."

Guardian's team follows a well-defined, formalized process from start to finish, says CTO Richard Scott. "Together we evaluate all aspects of technology solutions. It's based on a matrix and scoring and a very pragmatic, objective way of looking at the solutions," he says.

"We have good vendor management processes," which are part of Guardian's governance model, Wander says. Guardian has the same operational processes for SaaS and on-premises software. "We have operational performance management. We check response times just as we would do internally. And we take end-user satisfaction measures over time," he says.

**We need the ability to scale up and down. That's been our most heinous fight.**

CINDY MCKENZIE,

## A Disciplined Approach

Start scaling up SaaS with a centralized procurement model, these executives say. Before Guardian developed its federated approach to technology acquisition, its SaaS deployments didn't always go through IT, says Doug Greene, vice president of corporate systems, security, risk and compliance at Guardian. That's a common problem, especially in large companies, according to Robert DeSisto, an analyst at Gartner.

"I get calls from sales organizations that are buying directly from Salesforce.com outside of the IT procurement process," he says. One client he spoke with had 19 individually negotiated Salesforce.com contracts, none of which went through IT. That business was losing its volume purchasing power, and contracts weren't getting the scrutiny they deserved, DeSisto says.

Both McKenzie and Wander say it's also critical to understand the fully loaded costs of hosting applications on-site and to include that in the technology acquisition model when comparing costs to SaaS alternatives. "We always do a five-year total-cost-of-ownership evaluation that includes all costs, such as power, data center resources and staffing," says McKenzie.

But Tom Check, CIO at Visiting Nurse Service of New York, says organizations shouldn't draw any conclusions based on IT costs alone. The $1.5 billion provider of home healthcare services has about a half-dozen SaaS deployments, including HR and CRM.

There's also one application that its nearly 4,000 clinicians in the field use to order medical supplies. In that case, Check says, "the software subscription was higher than what we incurred in the past, but the overall cost of the business process has gone down and the value to the business has increased."

At Guardian, upgrade-and-refresh cycles have traditionally consumed 12% of the shared services budget. The move to SaaS, and an intense focus on expense optimization, has transformed Guardian's IT budget. "What makes SaaS valuable is the continuous upgrading without the burden on our organization," says Scott.

Today, 40% of the budget goes toward running and maintaining existing operations, down from about 60% a few years ago, leaving more money to invest in solving other business problems, says Wander.

## Scaling Up the Contract

The contract sets the tone for the relationship with a cloud services provider, says Wander. If you want to be successful, he says, "focus on the contract."

Unfortunately, "cloud computing often is not amenable to in-depth negotiations," says Russell Weiss, a partner at Morrison & Foerster, a law firm that specializes in negotiating service agreements. "Click-wrap agreements" — the ones users typically opt for when signing up for SaaS offerings online — are the norm for small and medium-size businesses. "They're full of 'outs.' When you read the fine print, it can be very alarming," he says (see "Would You Sign This Contract?" on page 14).

Fox's McKenzie says it's critical to think about contract terms and conditions early in the process by making clear what terms the organization can live with and which ones are nonstarters. "I have a requirements template, request for information and request for proposal templates, and a contract template with all of our criteria," she says. Included are canned paragraphs covering important areas such as information security. "If they can take that, we don't need to involve information security again," McKenzie says.

Greene says Guardian starts by clearly defining the service it's signing up for. "Make sure you have a defined service, not a product name. And ensuring that baseline functions won't change with updates to the SaaS application is critical," he says. "You want to make sure you're

getting your minimum [requirements] around security and functionality [and that] they can't dumb down the product in a future release."

Limitations of liability clauses can be a major sticking point. "[The vendors] want no liability, and we want unlimited liability," says Wander. As with remediation for failure to provide service at agreed-upon levels, providers usually limit liability to a refund of up to the total dollar amount of the contract — or a prorated service credit. "But if a service is buggy, do you really want more of something that's bad? It's better to get a promise of better service or a certain termination right," says Weiss. Likewise, a data breach can easily cost more than the value of the contract.

Finally, contract pricing can come back to bite you, and vendors don't like to make downward price adjustments for changing user counts, as McKenzie discovered. "We need the ability to scale up and down. SaaS doesn't work that way. That's been our most heinous fight," she says, because vendors wanted to lock Fox Entertainment Group into a volume purchase agreement for three or five years.

Wander had better luck. "We have a five-year contract that locks in terms and conditions but trues up on an annual basis. We've gotten very good terms in many cases," he says. But Guardian is a big account, he admits, adding, "I don't think everyone can achieve that."

There are two other ways to improve your negotiating position, says Weiss. One is to announce up front that you'll be doing competitive bidding, and then take the most favorable contract terms and pricing from each proposal and ask vendors to meet them. Another is to work with a reseller. "They can help out with terms," he says.

## Other Challenges

Still, SaaS isn't a fit for every application or large business. Boeing provides SaaS applications to its customers at MyBoeingSuite.com but uses only about a half-dozen SaaS offerings itself — in part because it's a defense contractor and must adhere to strict data security requirements. "Things that hold lots of intellectual property are way out of scope for SaaS," says Ted Colbert, vice president of IT infrastructure at the aerospace giant.

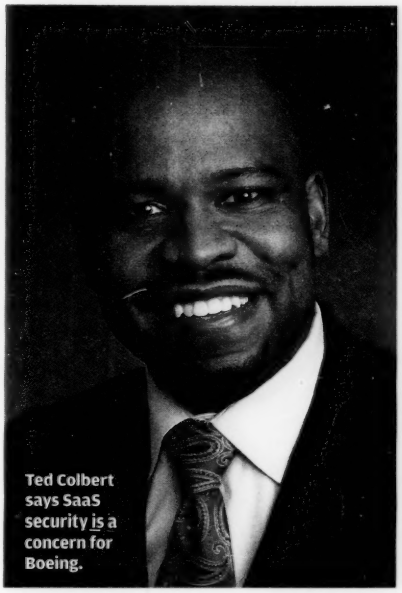
Integration issues present another potential challenge. For example, Boeing's current HR applications for recruiting, staffing and other functions are built around a data warehouse. "To use SaaS, we would have to build more interfaces than we have today, which would drive our complexity higher," Colbert says.

Also, with 160,000 employees, the ability of SaaS providers to scale is a concern. "We haven't seen that play out yet," he says.

And Boeing's complex business processes would require extensive customization of any SaaS application. "The traditional SaaS offerings don't support the structure we have today," Colbert says, but Boeing will be better positioned for SaaS as it continues to simplify its business processes.

As the number of SaaS applications in use grows, managing integrations and data flows becomes a bigger concern. "One of the things we're careful about is understanding the integration and what that does to the overall profile of our solutions," says Scott at Guardian. As part of its governance process, Guardian has always had life-cycle methodologies for the software it builds internally. Scott's team extended that to accommodate SaaS.

"Having this template to follow, which is predictable, has proved itself and is really one of the secrets to our success," he says.



Ted Colbert says SaaS security is a concern for Boeing.

Some business applications in the cloud aren't up to enterprise standards. "There are certain scenarios that aren't there yet," Greene says. In some situations, the risk profile doesn't match the organization's requirements. In others, the business might need to wait until existing IT investments are fully amortized before investing in SaaS.

Even Guardian is still nibbling around the edges when it comes to moving core ERP applications to the cloud, and Gartner says cloud-based ERP implementations aren't nearly as common as cloud-based HR and CRM systems.

SaaS offerings for core ERP applications are still evolving. "One process I haven't seen in maturity out there yet is core financials," says Greene. McKenzie also evaluated financial service offerings but declined them. "The two major products I looked at were not ready for prime time. Honestly, the market is not mature enough," she says.

Overall, IT executives say their experiences with SaaS providers have been generally positive. "We haven't had one real problem, never a breach or had a vendor go away or bad service or SLA breaches or had to sue anybody," McKenzie says. "Our experiences have been exceptionally good — so good that we're pushing more and more."

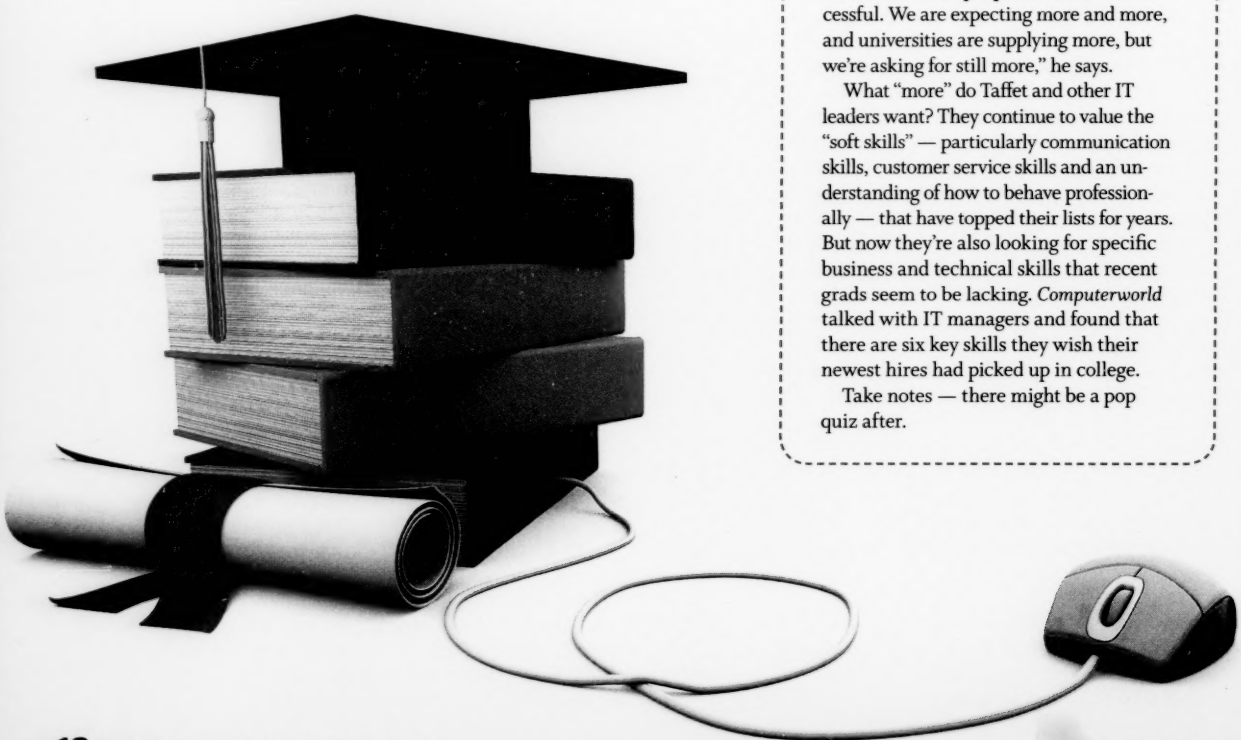
These IT executives say SaaS didn't win out in every case. But Guardian chose that option in 20 instances because the business case made sense and the services were mature enough to meet the needs of a large enterprise in areas such as service-level performance and security. And Guardian had the clout to negotiate favorable contract terms for service levels, limitation of liability clauses, pricing and other requirements.

Every system that isn't a competitive differentiator should be delivered as a service, says Wander, warning that "businesses that fail to pare their legacy architecture may find their core business disrupted by smaller, nimbler companies who have built on SaaS and cloud." ◆

# 6 Key Skills IT Grads Lack

**New tech graduates are smart, their IT managers say, but they still need coaching in these key areas.**

BY MARY K. PRATT



**REG TAFFET** is scouting for talent.

The CIO of U.S. Gas & Electric in North Miami Beach recently hired four new staffers and was looking to add 11 more people to his team of 20. His list of open positions included an EDI programmer, a risk management programmer, a CRM programmer, a business analyst and an assistant IT manager.

Taffet says he doubts any new college grad could easily fill any of those roles. Undergraduate and graduate schools aren't able to keep up with the needs of enterprise IT shops, he says.

"It's a horrible thing to say, but there's just not enough time [in college to learn] all the skills that people need to be successful. We are expecting more and more, and universities are supplying more, but we're asking for still more," he says.

What "more" do Taffet and other IT leaders want? They continue to value the "soft skills" — particularly communication skills, customer service skills and an understanding of how to behave professionally — that have topped their lists for years. But now they're also looking for specific business and technical skills that recent grads seem to be lacking. *Computerworld* talked with IT managers and found that there are six key skills they wish their newest hires had picked up in college.

Take notes — there might be a pop quiz after.



ROBERTO RIZZO / FOTOLIA

## 1. Knowledge of Business Basics

Sure, new computer science grads can program, but do they understand accounts receivables, logistics and operations, or marketing plans?

Probably not, says Todd Thibodeaux, president and CEO of the Computing Technology Industry Association (CompTIA), headquartered in Downers Grove, Ill.

That's because most students in computer science undergraduate programs still do the majority of their coursework within that field — even though many end up in corporate IT positions where they're expected to develop applications to facilitate the work done by other departments. And while graduate-level IT programs do a better job of offering business-related courses, there can still be a knowledge gap.

> **We are expecting more and more, and universities are supplying more, but we're asking for still more.**
>
> **GREG TAFFET,** CIO, U.S. GAS & ELECTRIC

Colleges are starting to address the problem, says Brian Janz, an MIS professor at the University of Memphis's Fogelman College of Business and Economics and associate director of the university's FedEx Center for Supply Chain Management.

The university is in its second year of following the IS 2010 model curriculum designed by the Association for Information Systems and the Association for Computing Machinery. That plan calls for teaching tech students both IT skills and professional skills such as communication and leadership.

The switch has brought more business studies into the MIS coursework, Janz says. "There are always going to be gaps that are going to be very specific to the hiring organization, but we can make sure the foundation is there," he says. "If we can give them the sound foundation, [businesses] can give them the stuff specific to their organization."

In the meantime, IT leaders have developed strategies to ensure their new employees have basic business acumen. Taffet, for example, looks for recent grads with some previous work experience — and a corresponding understanding of how a business operates — but other employers often snap up those candidates quickly.

For those new hires who don't have sufficient business knowledge, particularly in the area of finance, Taffet teaches what he calls "Finance 101" — a series of informal lessons on basic business accounting concepts like accounts receivable and accounts payable.

"It's less glamorous than a lot of the new things that are being taught, but it's just as important that an employee understand [the business functions] that all companies have," he explains.

## 2. Experience With Systems Integration

There's no denying that college students, regardless of their major, get plenty of computer experience. But that doesn't mean they're schooled in the IT processes that businesses use, says Thibodeaux.

Most computer science students spend a majority of their time in college learning how to build their own applications and systems, he points out, even though businesses often don't necessarily need that type of expertise.

"When you get into the business world, it's a lot less about having to create your own system and more about how to integrate systems," Thibodeaux says.

People who can build systems from scratch may have impressive talents, he explains, but many companies find more value in those who can integrate multiple enterprise applications and commercial packages or can take a function created internally and integrate it into an established system.

To compensate for this skills gap, many corporate IT departments choose to train new hires themselves, he says. Large companies tend to engage consultants to aid in the process, while small and midsize companies find ways to train people directly.

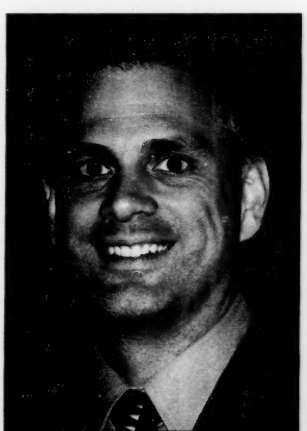
## 3. Emerging Technologies Expertise

Business intelligence (BI) and cloud computing are two emerging tech trends that are high priorities to enterprise IT managers, but those topics haven't trickled down into college curricula yet.

Colleges can offer only so many courses, and with technologies changing so rapidly, there tends to be some lag time when it comes to developing extensive coursework in evolving trends, says Marty Sylvester, senior vice president of Modis, an IT staffing firm in Harrisburg, Pa.

Sylvester says he regularly hears from CIOs who say how hard it is to find young people trained in emerging enterprise technologies, particularly cloud computing.

Some companies offer crash courses to get new hires up to speed. One employer that takes that approach is Pariveda Solutions, a Dallas-based IT consultancy. CEO Bruce Ballengee says Pariveda generally hires recent grads who hold bachelor's degrees in MIS or computer science and then starts them off with a week of "developer school" to familiarize them with emerging technologies they may not have studied in college, such as cloud computing and BI, as well as in-demand enterprise programming languages like SQL, .Net and Java.



Colleges don't teach the "basic basics" of IT, says Jeff Bowden of Dassault Systèmes.

## 4. The Tech Basics

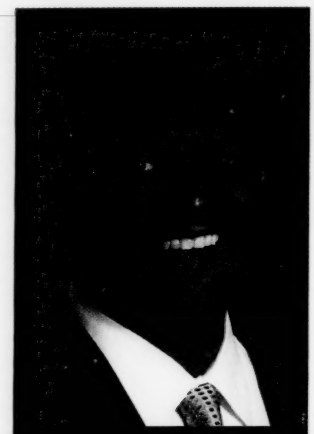
As IT becomes increasingly advanced, Jeff Bowden has seen a decline in the ability of college graduates to handle simple tech tasks. "One gap we're finding is that colleges don't teach the real basic basics," says Bowden, director of IT systems at Dassault

Systèmes, a software vendor in Auburn Hills, Mich.

Bowden needs new hires who have basic tech skills — they have to know their way around a command prompt, understand batch scripting or know how to fix a PC when it's not responding to input from the mouse.

"When you started 20 years ago, you were forced to learn this, but as computers evolved, people ignored this basic stuff," he says. "Yet there can be a strong need for it when you're troubleshooting computers" — a task that's often part of an entry-level IT job.

Bowden says he often leaves his new hires to figure out what to do on their own when faced with basic tech problems. "Our preference is getting them to learn how to do it — Googling it and so on. Then it's something they own. Once you have [hands-on experience] a few times, then you know the technology," he says, adding that he sometimes asks more senior staffers to teach new hires if time is short.



Team-building training is key, says James T. Brown, president of SEBA Solutions.

## 5. Familiarity With Legacy Systems

Modis's Sylvester says businesses are still looking for people who can work on legacy systems. They want workers who know Cobol, Customer Information Control System (CICS) and other mainframe skills. But colleges aren't teaching those subjects anymore, Sylvester says.

"There's a real concern that some of the mainframe skills that companies will be losing as the baby boomers retire aren't being taught in the universities," says Jerry Luftman, executive director and distinguished professor at the School of Technology Management at the Stevens Institute of Technology in Hoboken, N.J. He says some companies now ask vendors of legacy systems to help train new hires.

Luftman and Sylvester both say that companies are trying to find college grads who are willing to learn older technologies, but that's no easy task. They say some employers are trying to persuade young people to learn mainframe skills by pointing out that they'll be doubly marketable if they're up on both the latest technologies and legacy systems.

"The skills to support legacy systems are marketable to many large organizations — corporations, government, service providers," Luftman says, although recent grads "might not always see the bigger picture or long-term opportunity at such a young age."

## 6. The Ability to Work on a Team

This might come as a surprise, but IT leaders report that the generation that spends so much time on Facebook, Twitter and other online communities isn't particularly skilled at collaborating with others in the workplace.

"As much as we'd like to think that this generation is all about social media, working together continues to be a significant challenge," Thibodeaux says, noting that this weakness is particularly prevalent among computer science majors who spent a lot of time in college working on projects alone. "A lot of them don't know how to work together effectively or set and manage expectations. That's not being taught very well in colleges or graduate schools."

James T. Brown, president of consulting and training firm SEBA Solutions in Viera, Fla., says some colleges are trying to address that deficiency by assigning homework to teams rather than individual students. Unfortunately, this approach isn't always successful because the teams often just break the assignments into pieces that individuals complete on their own.

Brown says only a handful of companies offer employees robust leadership and team-building training programs — and they're the ones that recognize that they get the most value out of employees who work well with others. ◆

**Pratt** *is a Computerworld contributing writer in Waltham, Mass. You can contact her at marykpratt@verizon.net.*

# Traits IT Managers LOVE

**WHILE IT'S TRUE that IT managers are dismayed that new tech grads lack certain skills, overall they agree that this new generation is tech-savvy, hard-working and willing to learn.**

Todd Thibodeaux, president and CEO of CompTIA, says he hears from colleagues that the latest graduates are energetic, creative and eager to contribute.

"I'm not sure that was always the case," he says. "Twenty years ago, there was more of a command-and-control environment. People didn't volunteer themselves or jump into projects as much. The kids today like variety, and they have the energy, creativity and good nature that comes along with that."

IT executives also say their latest college hires have an intuitive sense of technology – in particular, an understanding of social networking and ideas on how to apply it to enhance business performance.

"Often they have great insights as to what ought to be tried or to what might work," says John N. Oglesby, an IT executive in Tennessee and a founding member of the Memphis chapter of the Society for Information Management. "They bring a completely new outside perspective, and that's typically where innovation comes from."

– MARY K. PRATT

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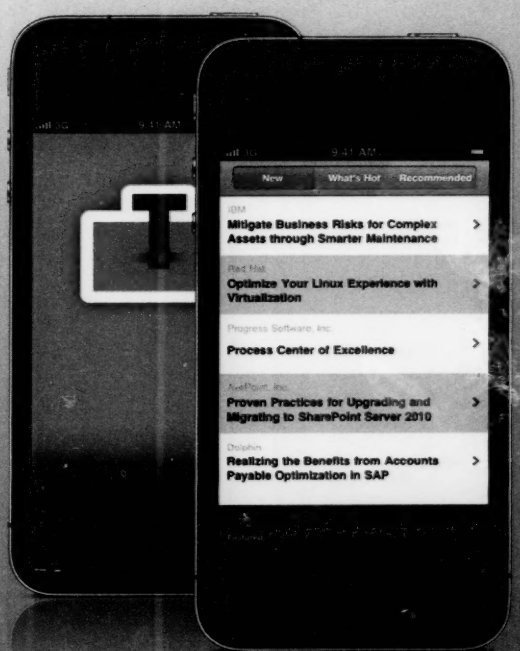


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# YOUR BIG DATA TO-DO LIST

**GOT YOUR** "big data" plan in place? If not, you may want to think about implementing one.

Big data is being hailed — or hyped, depending on your point of view — as a key strategic business asset of the future. That means it's only a matter of time before the suits in the corner office want to know IT's thoughts on the matter.

What to tell them? To be sure, handling large amounts of data isn't virgin territory for most IT departments, but beyond the hype, analysts say, big data really is different from the data warehousing, data mining and business intelligence analysis that have come before it.

Data is being generated with greater velocity and variability than ever before, and, unlike data in the past, most of it is unstructured and raw (sometimes called "gray data").

Blogs, social media networks, machine sensors and location-based tools are generating a whole new universe of unstructured data that — when quickly captured, managed and analyzed — can help companies uncover facts and patterns they weren't able to recognize in the past.

"We've collected data for a long time, but it was very limited — we produced a lot of it, but no one was doing much with

**It's time for IT to lay the groundwork** for what's being hyped as the next big strategic initiative for business. **BY BETH STACKPOLE**



JON FEINGERSH / GETTY IMAGES

it," says Paul Gustafson, director of Computer Sciences Corp.'s Leading Edge Forum technology programs. "The data was archived, and it was modeled around business processes, not modeled as a broader set of core knowledge for the enterprise. The mantra is this shift from collecting to connecting."

IT is standing at the forefront of this data revolution, industry observers say.

"This is an opportunity to walk into the CEO's office and say, 'I can change this business and provide knowledge at your fingertips in a matter of seconds for a price I couldn't touch five years ago,' " says Eric Williams, CIO at Catalina Marketing.

Williams should know — Catalina maintains a 2.5-petabyte customer-loyalty database that includes data on more than 190 million U.S. grocery shoppers collected by the largest retail chains. This information is, in turn, used to generate coupons at checkout based on purchase history.

To steer organizations into the era of real-time predictive intelligence, Williams and other industry watchers say, tech managers must evolve their enterprise information management architecture and culture to support advanced analytics on data stores that measure in terabytes and petabytes (potentially scaling to exabytes and zettabytes).

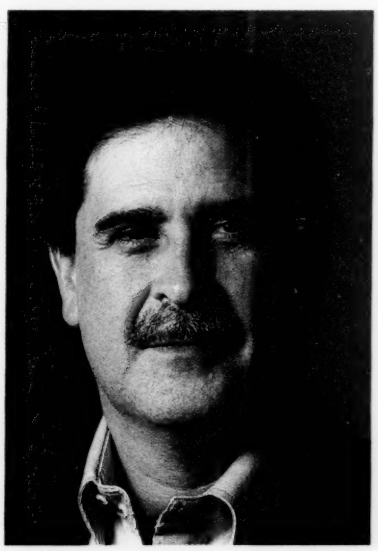
"IT is always saying they want to find ways to get closer to the business — [big data] is a phenomenal opportunity to do exactly that," Williams says.

Rather than waiting for the pieces to fall into place, savvy IT leaders should start prepping themselves and their organizations to get ahead of the transformation, say analysts such as Gartner's Mark Beyer.

Here are the top five actions tech managers should be taking today to lay out a proper foundation for the big-data era of tomorrow.

**"This is an opportunity to walk into the CEO's office and say, 'I can change this business.'**

**ERIC WILLIAMS,**
CIO, CATALINA MARKETING



## Take Stock of Your Data

Nearly every organization potentially has access to a steady stream of unstructured data — whether it's pouring in from social media networks or from sensors monitoring a factory floor. But just because an organization is producing this fire hose of information, that doesn't mean there's a business imperative to save and act on every byte.

"With this initial surge around big data, people are feeling an artificial need to understand all the data out there coming from Web logs or sensors," notes Neil Raden, an analyst at Constellation Research.

Part of that anxiety may be coming from vendors and consultants eager to promote the next big thing in enterprise computing. "There's a certain push to this coming from people who are commercializing the technology," Raden observes.

Smart IT managers will resist the urge to try to drink from the fire hose, and will instead serve as a filter in helping to figure out what data is and isn't relevant to the organization.

A good first step is to take stock of what data is created internally and determine what external data sources, if any, would fill in knowledge gaps and bring added insight to the business, Raden says.

Once the data scoping is underway, IT should proceed with highly targeted projects that can be used to showcase results as opposed to opting for big-bang, big-data projects. "You don't have to spend a few million dollars to start a project and see if it's worth it," Raden says.

## Let Business Needs Prevail

You may have heard this before, but IT-business alignment is critical to an initiative as huge and varied as big data, IT analysts say. Many of the initial big-data opportunities got started in areas outside of IT; marketing departments, for example, have been tapping into social media streams to gain better insights into customer requirements and buying trends.

While specialists in specific disciplines on the business side may recognize the money-making opportunities, it is IT's responsibility to take charge of the data-sharing and data-federation concepts that are part and parcel of a big-data strategy.

"This is not something IT can go out and do on its own," says Dave Patton, principal information management industries analyst at PricewaterhouseCoopers. "It will be hard to turn this into a story of success if [the initiative] is not aligned to business objectives."

Early in Catalina Marketing's big-data initiative, Williams brought business managers together with its financial planning and analysis (FPA) group in a team effort to make a business case for information architecture investments.

The business side identified areas where new insights could deliver value — for example, in determining subsequent purchases based on shopping cart items or through a next-buy analysis based on product offers — and the FPA team ran the numbers to quantify what the results would mean in terms of enhanced productivity or increased sales.

## Re-evaluate Infrastructure

Big data initiatives will require major changes in both server and storage infrastructure and information management architec-

*Continued on page 25*

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Continued from page 23

ture at most companies, according to Gartner's Beyer and other experts. IT managers need to be prepared to expand their systems to deal with the ever-expanding stores of structured and unstructured data, they say.

That requires figuring out the best approach to making systems both extensible and scalable and developing a road map for integrating all of the disparate systems that will feed the big-data analysis effort.

"Today, most enterprises have disparate, siloed systems for payroll, for customer management, for marketing," says Anjul Bhambhri, IBM's vice president of big-data products. "CIOs really need to have a strategy in place for bringing these disparate, siloed systems together and building a system of systems. You want to be asking questions that flow across all these systems to get answers."

## Bone Up on the Technology

The big-data world comes with a long list of new acronyms and technologies that have likely never graced a CIO's radar screen.

Open-source tools are getting most of the attention; technologies like Hadoop, MapReduce, and NoSQL are being credited with helping Web-based giants like Google and Facebook churn through their reservoirs of big data. Many of these technologies, while now available in commercial forms, are still fairly immature and require people with very specific skills.

Other technologies that are important to the big-data world include in-database analytics, columnar databases and data warehouse appliances.

IT managers and their staffs will need to understand these new tools to ensure that they'll be able to make well-informed big-data decisions.

## Prepare Your Staffs

Whether they need Hadoop experts or data scientists, most IT organizations are sorely lacking the talent necessary to take the next steps with big data. Analytic skills are perhaps the most crucial, and that's the area where most IT staffs have the biggest gaps.

McKinsey projects that in the U.S. alone, there will be a need by 2018 for 140,000 to 190,000 additional experts in statistical methods and data-analysis technologies. The job titles that will be in demand will include the widely hyped emerging role of data scientist.

In addition, McKinsey anticipates a need on either the business or tech side of the house for another 1.5 million data-literate managers who have formal training in predictive analytics and statistics.

For some companies, especially those in less populated areas, staffing will likely be one of the more challenging aspects of a big-data initiative. "[Big data] definitely requires a different mindset and skills in a host of areas," says Rick Cowan, CIO at True Textiles, a Guilford, Maine-based contract manufacturer of interior fabrics for the commercial market.

"As a medium-sized business, it's been a challenge to be able to get staff and keep them up to speed with the ever-changing environment," says Cowan. To address the need, he has begun to retrain programmers and database analysts to get them up to speed on advanced analytics.

IT department heads will have to do some transforming of their own to excel in this brave new world. While the best tech leaders of the past have been part information librarian and part infrastructure engineer, the IT managers of the future will be a combination of data scientist and business process engineer, says Gartner's Beyer.

"CIOs have been used to managing infrastructure based on a given instruction set from the business, as opposed to a CIO that is able to identify the opportunity and therefore push towards innovative use of information," he explains. "That's the transformation that needs to happen." ◆

**Stackpole,** *a frequent* Computerworld *contributor, has reported on business and technology for more than 20 years.*



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# Security Manager's Journal

MATHIAS THURMAN

## Hackers Call Home, on Our Dime

**Someone is making calls costing thousands of dollars via the IP telephony setup in a small European office.**

**IT'S BEEN A WHILE** since we've had a security breach worth mentioning (that we know of). Last week we had one, and it was an eye-opener.

A small development office in Western Europe was informed by the local telephone company that a high number of calls were being made from the office's IP telephony setup to a Middle Eastern country. When we looked into it, we found that in just 15 days, over $30,000 in calls had been made to several Middle Eastern countries, as well as Russia, China and a couple of Central American nations.

I immediately told the folks in the European office to have the phone company block the suspect call locations, file a police report and send me the complete running configuration from the router.

The office in question came to us through an acquisition about four years ago, well before my arrival. Apparently, the acquired company had just purchased new equipment, including a Cisco router used as a voice gateway for communicating with several other offices around the world. After the acquisition, we retained the Cisco routers, since we use IP telephony extensively.

When the configuration report arrived, I gave it to my security analysts and a few colleagues who are familiar with the secure configuration of Cisco phone gateways. As suspected, an early version of Cisco's IOS software was running on this router and it had no toll-fraud prevention configuration. Since the router wasn't properly locked down, an outside caller could connect to our phone gateway on TCP 5060, obtain a dial tone and make calls.

Unfortunately, it wasn't just a lone hacker who was making calls on our system. The call setup logs had captured IP addresses from around the world, suggesting that the hacker had shared our vulnerability with hundreds of people. While we can't know for sure, it would seem that our configuration was either sold or traded on the black market.

Having diagnosed the problem, we set out to rectify it. We scheduled a change control to have the router upgraded to the most current supported version of IOS, which includes support for toll fraud, and then configured the router to prevent this and other forms of toll fraud.

Next, we took the lessons learned from this one office and applied them to our locations worldwide. We conducted an assessment of all of our Cisco call gateways to determine if any of them were susceptible. Sure enough, three other small offices in Europe and one office in Austin were running vulnerable versions of IOS. (Coincidentally, all of the offices had come to us in various acquisitions over the past three to four years.)

the discussions about security! **computerworld.com/blogs/security**

> **The hacker apparently had shared our vulnerability with hundreds of people.**

### Some Relief

We are fully cooperating with law enforcement and the phone company, and as a result, we may actually be granted some relief from the $30,000 bill.

But this incident has spurred me to further action. I plan to use some of my quarterly budget for vulnerability assessments and penetration testing by hiring a reputable organization to conduct a complete assessment of our global IP telephony environment — everything from phones and the call manager to unity messaging and the underlying network equipment that enables IP telephony.

And because we acquired so many of these vulnerabilities, I am going to update my M&A playbook to emphasize the need to assess any IP telephony infrastructure we inherit. One final precaution we are taking is to evaluate our options for correlating Cisco call log data and other relevant logs within our recently purchased security incident and event management tool. ◆

*This week's journal is written by a real security manager,* ***"Mathias Thurman,"*** *whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com.*

### Trouble Ticket

» A small office in Europe discovers that someone has hacked its IP telephony router.

» Update the operating system to prevent toll fraud, and assess the IP telephony setups at offices around the world.

# PRESTON GRALLA

## Apple Will Never Unseat Microsoft in the Enterprise

**Buying devices in onesies and twosies will never compete against the massive buys overseen by central IT.**

**APPLE IS RIDING HIGH** these days, not just in the consumer market with the iPhone and iPad, but increasingly in the corporate market as well. Some people envision the day when Apple will challenge Microsoft in the enterprise. That will never happen.

In early January, Forrester Research came out with an eye-popping prediction: In 2012, enterprises will spend 58% more on Apple hardware than they did in 2011 — an estimated $19 billion. And by 2013, that figure will hit $28 billion, Forrester added.

Analyst Andrew Bartels said, "The biggest disruptive force in the computer equipment market is not [the cloud], but Apple. Its rapid growth in the corporate market has been the big surprise of 2011, and it will be even more of a factor in 2012."

Bartels cited several factors for the growth. High on the list are what he calls "clandestine" purchases of Apple products such as iPads and MacBook Airs by high-level employees, who essentially sneak them in the back door. Bartels added that although Apple still isn't enterprise-minded, Apple CEO Tim Cook is more enterprise-focused than Steve Jobs had been. Bartels noted that Apple has created a corporate sales team and now offers volume discounts on the iPad.

Bartels' prediction was seconded by Forrester's Frank Gillett, who said of Microsoft's dominance of the enterprise, "That's over and done with. We're in a heterogeneous environment, due to the increase in use of mobile devices, hardly any of them Windows, and a dramatic increase in using technology at home or out of sight of enterprise IT."

Forrester claims that more than 20% of enterprise employees now use an Apple device for work, frequently one that they bought themselves.

Despite all that, Apple will never come close to unseating Microsoft in the enterprise. First, clandestine isn't a business plan. Buying devices in onesies and twosies will never compete against the massive, enterprisewide buys overseen by central IT. Second, Apple can't count on employees buying hardware out of their own pockets. Again, that's not a sustainable business plan.

A bigger issue is cost. Enterprises are simply too bottom-line-focused to pay the so-called Apple tax. And time is on Microsoft's side. Today, if you want a lightweight, ultraportable notebook, the best choice is the MacBook Air — but you have to pay through the nose for it. So clandestine purchases are understandable. But lightweight Windows-based ultrabooks will soon be here, and they'll significantly undercut the MacBook Air's price tag. As for tablets, there simply aren't any good Windows-based choices, so the iPad is a natural pick. But Windows 8 tablets are on the way, and there will be no need for iPads in the enterprise.

In addition, Apple doesn't have the kind of enterprise deployment tools that Microsoft has invested in, and it shows no signs of being serious about developing them.

Beyond that, the cloud will work in Microsoft's favor. When most enterprise software and services for employees are cloud-based, the actual devices used to access those resources become less important. Why spend extra for Apple machines when hardware is ultimately little more than a platform for a browser accessing the enterprise cloud?

So yes — Apple will make some inroads into the enterprise for the next year or two. And there will likely be some room, in a relatively limited way, for Apple hardware to live there. But Microsoft will continue to dominate the market. ◆

**Preston Gralla** is a *Computerworld.com* contributing editor and the author of more than 35 books, including *How the Internet Works* (Que, 2006).

# Career Watch

## Training Budgets Rebound

After deep cuts in 2008 and 2009, U.S. training budgets got a big boost in 2011, according to training advisory firm Bersin & Associates.

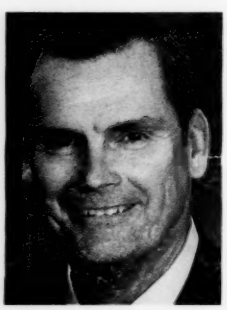
SOURCE: THE CORPORATE LEARNING FACTBOOK 2012, BERSIN & ASSOCIATES

## In-Demand Skills

**Listed below are the 10 most pressing hiring needs in 2012, according to Dice.** The jobs posting company says the appearance of system and network engineers on the list suggests that many companies have reached the limits of lean staffing and now need to bulk up again.

| | |
|---|---|
| 1 | Java/J2EE developers |
| 2 | Software developers/engineers |
| 3 | Mobile developers |
| 4 | Net developers |
| 5 | Project managers |
| 6 | Web developers |
| 7 | System engineers/administrators |
| 8 | Network engineers/administrators |
| 9 | SAP professionals |
| 10 | Business analysts |

SOURCE: DICE SURVEY OF NEARLY 1,200 TECH-FOCUSED HIRING MANAGERS AND RECRUITERS



ASK A PREMIER 100 IT LEADER

## Doug Beebe

*The corporate manager for information systems at Toyota Motor Sales USA answers questions about* **managers who get buried in the details** *and more.*

**We've gone through some devastating rounds of layoffs, and I've been doffing my manager's hat more and more to get hands-on with the technology — just because there's no one else to do it. But my CIO says a manager should manage, not work with, technology. I would agree if I weren't facing a mountain of things that won't get done without my help. What should I do?** Early in my career, I found myself in a similar situation. My CIO at the time taught me three valuable lessons that I still incorporate in my management style to this day. She did not buy the "I don't have enough head count" argument as sufficient reason to get buried in the details in order to get the work done. Instead, she challenged me to create a vision and a set of strategies to drive the organization toward a new model that was capable of expanding and contracting as the demand shifted. She also believed that I found comfort in seeing the results of my work much sooner than with the leadership/management activities I was responsible for. Lastly, she suggested I do a little self-reflection regarding what I wanted to do with my career. She knew this would be tough but believed that anytime you are not able to perform to expectations, you should look at yourself to see what your part in it is.

If you have a question for one of our Premier 100 IT Leaders, send it to **askaleader@computerworld.com**, and watch for this column each month.

**What desirable qualities do you find most lacking in recent hires?** Patience and leadership are two qualities I believe are not valued today to the extent they were in the past. The ability to obtain things as quickly as we can today has created a perception that slowing down is not productive. However, my experience tells me that inefficiencies in work processes can be reduced with better planning and a disciplined approach to delivering results. In addition, I believe in and subscribe to the philosophy that we need collaboration in the workplace. It generates better ideas and creates a more inclusive environment. However, there is an impact on leadership skills. The opportunities to naturally lead are reduced, and we need to be more attentive to the development of our future leaders.

**I'm in a midlevel IT position, and I'm thinking about getting an MBA to help further my career. Do you think this is a smart move, and if so, is this the right time?** I think continuous learning is what makes the future interesting. When I went back to get my MBA, I had 25 years of experience under my belt. I saw students with little to no business experience who wanted to expand their analytical capabilities. For me, it was more about confidence and gaining an understanding of the qualitative side of decision-making. We all had our reasons for being there. So when is the right time? Anytime, as long as you know what you want from the experience and what benefit you will gain. I urge you to seriously look inward for the answer.

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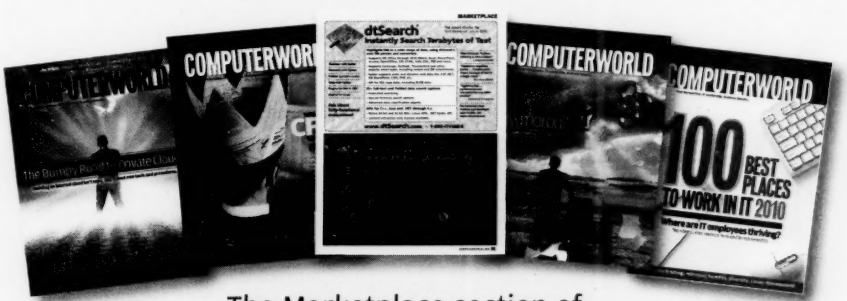


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Source: *Harvey Ad Measurement Study, Computerworld May 10, 2010

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# SHARKTANK

TRUE TALES OF IT LIFE AS TOLD TO SHARKY

HAL MAYFORTH

## You're *Sure* That's What You Want?

The phones at this company have a key sequence that enables auto-answer, so the phone doesn't ring – the caller is immediately connected to the phone's speaker, reports a netadmin pilot fish who's responsible for the phone system there. "There's a small satellite facility with loud production machinery, and when the phone there was accidentally placed in auto-answer mode, I was quick to offer to help," says fish. "But I was stopped in my tracks by the supervisor, who works at the main plant. He said, 'I *love* this. I can always tell if the machinery is running by placing a call. Leave it the way it is.' I pointed out that it will be difficult for the machine operators to hear an incoming phone call. 'That's not a problem,' he said. 'I can get their attention.' I gave up, and the phone is still on auto-answer a year later. Of course, I always snicker when I walk by the supervisor's office and hear 'SAM! I'M ON THE PHONE! SAAAAAAM!' "

## It's Easier This Way

One of this sysadmin pilot fish's regular tasks is to recover space on Windows servers. "We constantly received tickets for low space, so I usually looked up the biggest consumers and then called or emailed them and asked them to delete old and large files," fish says. "This worked well until I got the bright idea to use a script that would find old and large files, then dump the user's email ID into an Outlook message. The first few times worked great. But then one day, a VP stopped by my desk to tell me that company officers didn't know what the email was about because their executive assistants handled all that, and not to bother them with any more emails. Within a few months, we purchased more SAN. I wonder how much free space it has."

## Just Making Sure?

An outside vendor handles spam filtering at this small university, but it's not unusual for users to forward spam that sneaks through to this pilot fish and request that it be added to the blacklist.

"Such requests usually are handled by analyzing the header to see if there's anything that can be done to make the filter more effective," says fish. But sometimes it's easier – such as when a user forwards messages with sexually explicit language that any spam filter worth its salt should have caught.

Reports fish, "Running the message headers through the software's built-in analyzer brought back this result: 'Message marked as spam – status: quarantined.' I then explained to the user that if the message was in her quarantine folder, the system was doing its job – there was no need to release the message and forward it to the help desk."

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# THORNTON A. MAY

## A New Kind of IT Hero For a New Kind of World

**If you aren't the new type of IT leader, all you will lead is the herd that's heading toward the cliff.**

**WE STAND TODAY** on the brink of momentous years, a decade or so that will change how we work, learn, play, pay, heal and relate. All of this interests me, but nothing more so than what it will mean for the provisioning of information technology.

What will change is the very definition of IT leadership success. In the years ahead, achieving success will require a new kind of IT hero.

What top management expects from IT has already changed, and the old kind of IT hero is out of favor. IT success no longer means delivering high-cost, high-complexity and high-maintenance bloatware on time, on budget and at specification.

There are many differences between the old and new kind of IT hero. Multiple generations of IT leaders have been adept at answering questions, fulfilling goals and getting things done. Modern success in IT requires *asking* questions, *setting* goals and *evaluating* whether things are worth doing in the first place. If you want to be an IT leader in the years ahead, you need to be this new type of IT leader. Otherwise, all you will lead is the herd that's heading toward the cliff.

The new species of IT hero that the business world is looking for understands that what really matters in IT value creation is not which technology you buy or how efficiently you deploy what you bought; rather, what matters is the purpose to which you put the cornucopia of technology possibilities available to you. The new IT leaders also know that the only effective way to determine which problems IT needs to solve is to engage intimately and intensely with those using the technology. They must take a page from the commanders of modern American fighting forces, who embed credentialed anthropologists with the front-line troops in "human terrain teams" that engage in "rapid ethnographic assessment" — conducting interviews, administering surveys, learning about land disputes and social networks, and generally understanding how people think. To go deeper into military history, the new kind of IT hero must be less like Achilles (using brute force on problems) and more like Ulysses (figuring things out and coming up with innovative approaches that no one else ever thought of).

Increasingly, world-class IT organizations will serve as the eyes and ears of the enterprise. The old kind of IT hero looked at business processes and took something away (cost, time or complexity). The new kind of IT hero adds something (insight). The old kind of IT hero was consumed with performing tasks inside the enterprise. The new kind of IT hero is being asked to X-ray and explicate new developments in the external marketplace. A fast-food restaurant chain might ask its IT shop to shed light on artisanal trends in eating and nutrition. An automobile manufacturer might ask IT to flesh out and get inside of the new trend in customizing cars. A cable network might ask IT to figure out why a certain star is a big hit. Such requests are not transactional in nature.

One of the most important new functions of an IT hero is to serve as a sort of DARPA for the enterprise, creating and preventing strategic surprises in much the same way as the Defense Advanced Research Projects Agency has done for the U.S. military. Such vulnerability analysis may involve hunting down assumptions and putting them to the test.

Be sure you do the same with your assumptions about what defines IT success. ◆

**Thornton A. May** is author of *The New Know: Innovation Powered by Analytics* and executive director of the IT Leadership Academy at Florida State College in Jacksonville. You can contact him at thorntonamay@aol.com.

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